■ EDITORIAL

Joint registries

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The Presidents of the British, American, Australian, Canadian, New Zealand and South African Orthopaedic Associations, and of the American Academy of Orthopaedic Surgeons (CAROUSEL), have issued a joint statement encouraging an increase in the number of registries and emphasising their value in monitoring the large number of replacements being inserted worldwide.¹ The value of such registries is beyond dispute but without due care much duplicate information may be produced and conclusions drawn which may not necessarily be valid across different countries.²

The original national joint registry was the Swedish Knee Arthroplasty Project,³ which was launched in 1975 on the initiative of Goran Bauer, Professor of Orthopaedics at Lund, in Sweden. Since then some 16 or more national or regional registries have been established, the latest of them in Malawi, the first in Africa.⁴ What have these registries achieved? Their function is to record and monitor all the patients who receive arthroplasties in order to assess their long-term function. They are primarily an audit of the procedures which have been performed, assessing the success of both the particular types of implant and also the skill of the individual surgeons. They record details of the primary operation, but then no further information until the revision operation, if it is required.⁵ This allows comparison of results using different implants, and of the individual surgeons. It gives a more reliable guide to the value of a particular type of arthroplasty since it records the overall picture within a country, rather than the experience of skilled surgeons in specialist centres. Such information has been used to improve standards and has been successful in this respect.⁶

However, there is plainly more to be gained from registries. They can provide the basis for more detailed assessment of particular aspects of each procedure. Söderman and Malchau⁷ carried out a clinical outcome analysis of a cohort of patients which had been selected randomly from the Swedish registry. They used

the Harris and the Western Ontario and McMaster Universities (WOMAC) questionnaires and undertook clinical and radiological examinations of about a third of the patients. The definition of failure by these assessments may depend on the view of the observer and they noted that there was a higher rate of failure as judged clinically than was apparent from the registry. Overall, however, they considered that the registry provided a reliable picture of the outcomes. This type of evaluation of material from a registry is expensive and time-consuming, and presents a considerable logistical exercise.⁸⁻¹⁰

The development of patient-related outcome studies, and in particular the Oxford Hip and Knee scores, have made the analysis of material from the registries a more practical proposition. These scores have been used to follow a random selection of patients at six months and five years from the initial operation.^{11,12} It was noted that poor scores at six months were a reliable indication of the need for early revision and little change has been observed in the scores at the two assessments. Baker et al¹³ used the Oxford Knee score to review almost 10 000 patients by a postal questionnaire, obtaining a response rate of 87%. They found that 20% of patients were not satisfied with their operation, chiefly because of residual pain. The Swedish registry is actively pursuing this type of study to further enhance the value of their observations. None of the registries appear to have made a closer examination of the reasons for failure in those joints listed in their records. Such investigation could be pursued by a more thorough clinical and radiological review of such patients.

Attention has recently been drawn to the problems encountered when attempting a comparison of the information contained in different national registries. The format of a registry will be designed to address the needs and requirements of its nation, and therefore the structure and content of individual registries will differ. The design and naming of

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implants may vary between countries and confusion may arise when making comparisons between their findings.¹⁴ The European Arthroplasty Register has been designed to try and overcome these problems.¹⁵ It will be interesting to see the extent to which their efforts will be successful.

The concept of national joint registries has proved to be very satisfactory. However, it is clear that much more use can be made of the information which is fast becoming available. It should not be used purely as a means of economic audit, although it will prove useful to both governments and the profession in this capacity, but it must also be seen as a means through which the outcome of enhancing the lives of our patients should reach the highest level achievable. Various registries have emphasised the need for individual surgeons and units to have anonymous access to their results, allowing them to see how they compare with others. This allows the identification of 'outliers' who may be counselled or advised as to their deficiencies. It follows that if the overall results are unsatisfactory then the person or institution would have to cease carrying out joint replacements.

Early identification of implants which perform poorly has already proved useful, resulting in the withdrawal of such devices from the market.^{16,17}

However, in spite of the widespread enthusiasm for joint registries, there are many questions to be addressed. Again the emphasis needs to be placed on producing a degree of uniformity of design between registries which will allow the valid comparison of results and information. Given the considerable amount of information now available, the research aspects of registries would benefit from further development, perhaps with greater emphasis on patient related outcome studies and the assessment in greater depth of particular cohorts of interest. The Journal expects to have an increasing number of papers from registries. These will be reviewed with rigorous interest.

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